Georges Chebly

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| **Summary** | Ambitious Master's Robotics Engineering student seeking an internship in Robotics. Experienced with humanoids, robotic arms, and quadruped robots, with strong skills in both hardware and software. Passionate about advancing robotics through practical hardware design and system integration. |

Education

University of Pennsylvania — *May 2027*
MS Robotics, GRASP Lab

University of Massachusetts Amherst — Honors College — *May 2025*
Summa cum Laude — **GPA: 3.96/4.00**
BS Mechanical Engineering, Minor Computer Science

Technical Experience

Hardware Robotics Engineering Intern — *Jun 2025 – Jul 2025*
QSS AI & Robotics, Riyadh, Saudi Arabia
- Engineered and 3D-printed a robotic coffee tamper, enabling full automation and drink preparation in under one minute
- Integrated ESP32 and linear actuator driver for precise tamping cycles
- Collected and organized image data to support computer vision training

Undergraduate Teaching Assistant — Statics and Dynamics — *Jan 2023 – May 2025*
University of Massachusetts Amherst
- Supported 400+ students via email and weekly office hours (5 hrs/week)
- Proctored 10+ exams, including accommodations for disability services
- Graded homework and provided feedback

Software Robotics Intern — *Feb 2023 – Apr 2023*
Open Avenues, Outrider Technologies (Remote)
- Developed a ROS launch file for navigation and mapping with LiDAR in RViz and Gazebo
- Established communication between publisher and subscriber nodes
- Built Actionlib nodes to initialize pose and control robot motion

Leadership & Projects

Strong, Accurate, and Low-Cost Robot Manipulator — Honors Thesis — *May 2024 – May 2025*
*Published in **Humanoids 2025** [Link]*
- Designed a fully 3D-printable 6-DoF robotic arm that achieved sub-millimeter precision and 0.63 kg payload capacity at under $215 material cost
- Innovated lightweight cable-belt transmission systems and optimized structural design to reduce backlash and improve efficiency
- Validated the manipulator's performance through experiments, establishing a new benchmark for low-cost, high-performance robotics research and education

Guide Dog Robot — Capstone Project — *Aug 2024 – May 2025*
- Developing a 15 kg power-efficient guide dog robot with advanced mobility for Low Vision individuals
- Computed forward/inverse kinematics and inverse dynamics to select actuators (AK80-9)
- Optimized internal packaging of batteries, cameras, computers, and IMU

Team Leader — UMass Robotics Team — *Sept 2024 – May 2025*
- Managed a team of 10; set goals, assigned tasks, ensured timely delivery
- Led development of a humanoid torso with 7-DOF arm, neck, and body
- Integrated belt transmissions, capstan drives, and linkage mechanisms

Relevant Skills

Engineering: Prototyping, SolidWorks, Ansys, 3D Printing, Additive Manufacturing (FDM), Machining
Computer: Python, Matlab, Java, C, R, LaTeX, Microsoft Suite, ICDL
Soft Skills Trilingual (Arabic, French, English), Team player, Critical thinking, Problem solving, Active learning, Project Management

Activities & Interests

Fundraising for Children with cancer (CCCL), Jiu-Jitsu, Stocks & Cryptocurrencies, Soccer, Piano